

# Oklahoma Mesonet / ARS Quality Assurance Report

**March 2018**

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- Mesonet technicians completed scheduled rotations of 17 batteries, 3 barometers (PRES), 6 rain gauges (RAIN), 11 relative humidity sensors (RELH), 3 pyranometers (SRAD), 7 PRT thermometers (TAIR/TA9M), 1 wind sentries (WS2M), 1 wind monitor nose cone (WSPD), and 3 current excitations.
- Aspirator fan problem at the Byars Mesonet Site (BYAR) caused the aspirated air temperature to have a high bias during sunny, low wind periods. Aspirator fan was replaced. Affected data were flagged.
- Aspirator fan problem at the Burneyville Mesonet Site (BURN) is causing the aspirated air temperature to have a high bias during sunny, low wind periods. Affected data are flagged.

## MESO QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>TAIR</b>				
<b>RELH</b>				
<b>WSPD</b>	<b>Resolved</b>	<b>IDAB</b>	<b>34905</b>	<b>10m wind speed intermittently reported values much less than expected. Sensor replaced.</b>
<b>WDIR</b>				
<b>PRES</b>				
<b>SRAD</b>				
<b>RAIN</b>	<b>Resolved</b>	<b>VALL</b>	<b>34919</b>	<b>Primary rain gauge was over reporting. Sensor replaced.</b>

<b>TA9M</b>	<b>Resolved</b>	<b>LANE</b>	<b>34974</b>	<b>9m air temperature had low bias after precipitation. Damaged cable replaced.</b>
<b>WS2M</b>	<b>Resolved</b>	<b>TAHL</b>	<b>34856</b>	<b>2m wind speed often has 1-2 m/s low bias compared to 10m wind and neighbors. Sensor replaced.</b>
<b>TB10</b>				
<b>TS05</b>				
<b>TS10</b>				
<b>TS25</b>				
<b>TS60</b>				
<b>TR05</b>				
<b>TRB10</b>	<b>Current</b>	<b>CHAN</b>	<b>35005</b>	<b>Sensor intermittently stops heating.</b>
<b>TRS10</b>				
<b>TR25</b>				
<b>TR60</b>				

### ARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>RAIN</b>				

<b>VW05</b>	
<b>VW25</b>	
<b>VW45</b>	
<b>V05T</b>	
<b>V25T</b>	
<b>V45T</b>	

### FCARS QA Report for Standard Variables

Variable	Status	Site	Ticket	Remarks
<b>RAIN</b>				
<b>VW05</b>	<b>Resolved</b>	<b>F111</b>	<b>34839</b>	<b>Sensor frequently reports values near 0 for voltage 4. Soil temperature and soil moisture affected. Sensor and conduit replaced.</b>
<b>VW25</b>				
<b>VW45</b>				
<b>V05T</b>				
<b>V25T</b>				
<b>V45T</b>				

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'Current' tickets are the unresolved tickets as of the last day of the month OR those tickets added based on the Monthly QA analysis.

'Resolved' tickets are the sensor problems that were fixed during the entire month.

<b>Variable</b>	<b>Description</b>
<b>TAIR</b>	<b>Air temperature at 1.5 meters</b>
<b>RELH</b>	<b>Relative humidity at 1.5 meters</b>
<b>WDIR</b>	<b>Wind direction at 10 meters</b>
<b>WSPD</b>	<b>Wind speed at 10 meters</b>
<b>PRES</b>	<b>Air pressure</b>
<b>SRAD</b>	<b>Incident solar radiation</b>
<b>RAIN</b>	<b>Rainfall</b>
<b>TA9M</b>	<b>Air temperature at 9 meters</b>
<b>WS2M</b>	<b>Wind speed at 2 meters</b>
<b>TB10</b>	<b>Soil temperature at 10 cm under bare soil</b>
<b>TS05</b>	<b>Soil temperature at 5 cm under native sod</b>
<b>TS10</b>	<b>Soil temperature at 10 cm under native sod</b>
<b>TS25</b>	<b>Soil temperature at 25 cm under native sod</b>
<b>TS60</b>	<b>Soil temperature at 60 cm under native sod</b>
<b>TR05</b>	<b>Soil moisture: Calibrated DeltaT at 5 cm under native sod</b>
<b>TRB10</b>	<b>Soil moisture: Calibrated DeltaT at 10 cm under bare soil</b>
<b>TRS10</b>	<b>Soil moisture: Calibrated DeltaT at 10 cm under native sod</b>
<b>TR25</b>	<b>Soil moisture: Calibrated DeltaT at 25 cm under native sod</b>
<b>TR60</b>	<b>Soil moisture: Calibrated DeltaT at 60 cm under native sod</b>
<b>VW05</b>	<b>Soil moisture: Volumetric water content at 5 cm under native sod</b>
<b>VW25</b>	<b>Soil moisture: Volumetric water content at 25 cm under native sod</b>
<b>VW45</b>	<b>Soil moisture: Volumetric water content at 45 cm under native sod</b>
<b>V05T</b>	<b>Soil temperature at 5 cm under native sod</b>
<b>V25T</b>	<b>Soil temperature at 25 cm under native sod</b>
<b>V45T</b>	<b>Soil temperature at 45 cm under native sod</b>